

REMARKS/ARGUMENTS

Claims 3 and 9 are cancelled; Claims 12-20 are new.

Support for each amended and new claim is found at the originally filed claims and throughout the originally filed specification. Additionally, support for the feature of present Claim 1 “wherein the weight ratio of the monomer to the water is from 40:60 to 55:45,” is found, for example, at page 5, lines 23-24, of the originally filed specification. Support for the feature of present Claim 1 “wherein the water has a surfactant content of from 8% to 15% by weight of the water,” is found, for example, at page 5, lines 20-21, (from 5 to 15% by weight), and page 7, lines 30-33 (22 g of surfactant dissolved in 249.8g of water yields a surfactant content of 8.8% by weight (e.g., $(22\text{g}/249.8)*100\% = 8.8\%$) of the originally filed specification. Support for the present Claim 1 feature “wherein the amount of components (i) and (ii) ranges from 0.2 to 1.5% by weight, based on the weight of the monomer” is found, for example, at page 5, lines 8-11, of the originally filed specification. Support for new Claim 12 is found, for example, at page 4, lines 10-14, of the originally filed specification. Support for new Claim 13 is found, for example, at the table at page 9 of the originally filed specification. Support for new Claim 14 is found, for example, at Claim 1. Support for new Claims 15-20 is found, for example, at Claim 7.

No new matter is added.

The objection to Claims 1, 2, 8 and 10 is respectfully traversed. The objection to Claim 1 is obviated by correction of Claim 1 to correctly spell “divalent” and “isobutoxy” and by adding a parenthesis to the divalent group “ $-\text{C}(\text{O})-\text{C}(\text{CH}_2)_3-$.” The objection of Claim 2 is obviated by addition of the phrase “to form a mixture” to Claim 2. The objection to Claim 8 is obviated replacement of the word “obtainable” with the phrase “obtained by the process.” The objection to Claim 10 is obviated by replacement of the word “in” by the word “to.” Withdrawal of the objection is requested.

The indefiniteness rejection of Claim 8 is obviated by replacement of the word “obtainable” with the word “obtained.” Withdrawal of the rejection is respectfully requested.

The obviousness rejection of Claims 1-11 as being unpatentable in view of Tamori is respectfully traversed because Tamori does not describe or suggest, and “teaches away from,” the amount of surfactant present in Claim 1 and the claims depending therefrom.

Tamori, at page 7, paragraph 57, describes, in part that “The amount of emulsifiers [surfactant] used is usually from 0.1 to 5 parts by weight,...based on the total amount of component (A) [organosilane] (converted to completely hydrolyzed condensate) and component B [radical polymerizable vinyl monomer]....Exceeding 5 parts by weight is unfavorable, because the problem of foaming is encountered.”

In present Claim 1, the lowest possible amount of surfactant present in the polymer dispersion, as will be shown below, based on the weight of the monomer and silane present prior to polymerization, is 7.09%. 7.09% is higher than the maximum silane of 5 parts by weight (e.g., 5%) allowed by Tamori.

In the polymer dispersion of present Claim 1, the polymer is formed from polymerization of the monomer, component (i) and component (ii). The polymer dispersion is an aqueous dispersion, wherein the amount of water, relative to the amount of monomer present prior to polymerization, is given in a monomer:water weight ratio. Thus, for example, when the monomer:water weight ratio is 55:45, the amount of monomer can be, for this exemplary calculation, 55 g and the amount of water would be 45g. The lowest possible amount of surfactant in the water is 8.8% by weight of the water; and the maximum amount of silane present is 1.5% by weight based on the weight of the monomer. Thus, in this exemplary calculation, $8.8\% \times 45 \text{ g} = 3.96 \text{ g}$ surfactant, and the amount of silane is $1.5\% \times 55 \text{ g} = 0.825 \text{ g}$. The percent of surfactant present, based on the total weight of the

monomer and silane, would be $(3.96\text{g} / (55\text{g} + 0.825\text{g})) * 100\% = 7.09\%$. 7.09% surfactant, based on the total weight of the monomer and the silane present, is greater than the maximum amount of surfactant allowed by Tamori (e.g., 5%). Further, allowing condensation of the silane, as described by Tamori, and using the weight of condensed silane in place of the weight of the silane in the calculations, would reduce the weight of the silane component present in the calculations, thereby further increasing the amount of surfactant in the polymer dispersion of present Claim 1. Accordingly Tamori, does not describe or suggest all of the features of present Claim 1 and the claims depending therefrom, and “teaches away from” a feature of present Claim 1. Withdrawal of the obviousness rejection is respectfully requested.

The anticipation rejection of Claim 1 as being unpatentable in view of Eck is respectfully traversed, because Eck does not describe or suggest the amount of surfactant present in the polymer dispersion of Claim 1.

Eck describes, at column 6, lines 28-60, that the emulsifiers (e.g., surfactant(s)) are “employed in an amount of 0 to 6% by weight, based on the total weight of the monomers.” Present Claim 1 contains a surfactant amount greater than maximum 6% by weight, based on the total weight of the monomers, allowed by Eck. Eck therefore cannot anticipate present Claim 1 or the claims depending therefrom. This will be shown below, for the case of the lowest possible amount of surfactant present in present Claim 1 (e.g., amount of surfactant in the water is 8.8% by weight of the water, and the monomer:water ratio 55:45 on a weight basis).

In the polymer dispersion of present Claim 1, the polymer is formed from polymerization of the monomer, component (i) and component (ii). The polymer dispersion is an aqueous dispersion, wherein the amount of water, relative to the amount of monomer

present prior to polymerization, is given in a monomer:water weight ratio. Thus, for example, when the monomer:water weight ratio is 55:45, the amount of monomer can be, for this exemplary calculation, 55 g and the amount of water would be 45g. The lowest possible amount of surfactant in the water ranges is 8.8% by weight of the water. Thus, in this exemplary calculation, $8.8\% \times 45 \text{ g} = 3.96 \text{ g}$ surfactant. The percent of surfactant present, based on the total weight of the monomer, would be $(3.96 \text{ g} / 55 \text{ g}) \times 100\% = 7.2\%$. 7.2% surfactant, based on the total weight of the monomer, is greater than the maximum amount of surfactant allowed by Eck (e.g., 6%). Accordingly Eck, does not describe or suggest all of the features of present Claim 1 and the claims depending therefrom. Withdrawal of the anticipation rejection is respectfully requested.

The obviousness rejection of Claims 2-11 as being unpatentable in view of Eck is respectfully traversed, because Eck does not describe or suggest all of the features of these claims, and because Eck “teaches away from” a feature of these claims. The rejection of Claim 9 is obviated by cancellation of Claim 9.

Present Claims 2-8 and 10-11 depend, either directly or indirectly, from present Claim 1. As described above, the minimum amount of surfactant present in the polymer dispersion of present Claim 1, based on the total weight of the monomers, is 7.2%. Eck, in contrast to present Claim 1, allows a maximum amount of only 6%. Accordingly, Eck does not describe or suggest every feature of present Claim 1, and in fact, “teaches away from” the amount of surfactant in present Claim 1. Because present Claims 2-8 and 10-11 depend, either directly or indirectly from present Claim 1, Eck also does not describe or suggest the surfactant content present in these claims, and in fact, Eck “teaches away from” the surfactant content of these claims. Withdrawal of the obviousness rejection is requested.

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Applicants submit the present application is now in condition for allowance. Early notification to this effect is earnestly solicited.

Respectfully submitted,

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